

What is claimed is:

1. An image detector for an x-ray device, comprising:  
a plurality of photosensors, each including at least two electric contacts on which an electrical signal occurs upon an x-ray being detected, wherein at least one contact of the photosensors is arranged on its rear side, facing away from an image source, and wherein a material used for the photosensors is an organic photodiode material.
2. The image detector as claimed in claim 1, wherein the photosensors form an array in a spatially distributed arrangement.
3. The image detector as claimed in claim 1, wherein the photosensors are arranged on a substrate, wherein the contacts on the rear side of the photosensors are each connected to a plated-through hole in the substrate and, via the plated-through hole, to the rear side of the substrate.
4. The image detector as claimed in claim 3, wherein the substrate includes a material which exhibits a relatively low transparency to x-rays.
5. The image detector as claimed in claim 3, wherein a layer, which has a relatively lowest transparency to x-rays, is arranged on at least one of a front side and a rear side of the substrate.
6. The image detector as claimed in claim 3, wherein electric components and conductor tracks are arranged on the rear side of the substrate, wherein the tracks are connected to the plated-through holes and, via the plated-through holes, to the rear contacts of the photosensors, and wherein the photosensors are driven by the electric components and electrical signals of the electric components are tapped off.
7. The image detector as claimed in claim 6, wherein the components on the rear of the substrate also include electrically active components, wherein the signals from

the photosensors are at least one of A/D converted and evaluated by the electrically active components.

8. The image detector as claimed in claim 1, wherein a contact of each photosensor is arranged on its front side, facing the image source, wherein an electrically conductive layer is provided which makes contact jointly with all the front-side contacts of the photosensors, and wherein the layer serves at the same time as at least one of a fluorescent layer and as a contact layer to a fluorescent layer.

9. The image detector as claimed in claim 2, wherein the photosensors are arranged on a substrate, wherein the contacts on the rear side of the photosensors are each connected to a plated-through hole in the substrate and, via the plated-through hole, to the rear side of the substrate.

10. The image detector as claimed in claim 1, wherein the photosensors are arranged on a substrate.

11. The image detector as claimed in claim 1, wherein the photosensors are arranged on a substrate, wherein the contacts on the rear side of the photosensors are each connected to a through hole in the substrate and, via the through hole, to the rear side of the substrate.

12. The image detector as claimed in claim 10, wherein the substrate includes a material which exhibits a relatively low transparency to x-rays.

13. The image detector as claimed in claim 4, wherein a layer, which has a relatively lowest transparency to x-rays, is arranged on at least one of a front side and a rear side of the substrate.

14. The image detector as claimed in claim 4, wherein electric components and conductor tracks are arranged on the rear side of the substrate, wherein the tracks are connected to the plated-through holes and, via the plated-through holes, to the rear

contacts of the photosensors, and wherein the photosensors are driven by the electric components and electrical signals of the electric components are tapped off.

15. The image detector as claimed in claim 5, wherein electric components and conductor tracks are arranged on the rear side of the substrate, wherein the tracks are connected to the plated-through holes and, via the plated-through holes, to the rear contacts of the photosensors, and wherein the photosensors are driven by the electric components and electrical signals of the electric components are tapped off.

16. The image detector as claimed in claim 11, wherein electric components and conductor tracks are arranged on the rear side of the substrate, wherein the tracks are connected to the through holes and, via the through holes, to the rear contacts of the photosensors, and wherein the photosensors are driven by the electric components and electrical signals of the electric components are tapped off.

17. An image detector for an x-ray device, comprising:

a plurality of photosensors, each including at least two electric contacts, adapted to detect an x-ray, wherein at least one contact of each the photosensors is arranged so as to face away from an image source, and wherein the photosensors include an organic photodiode material.

18. The image detector as claimed in claim 17, wherein the photosensors form an array in a spatially distributed arrangement.

19. The image detector as claimed in claim 17, wherein the photosensors are arranged on a substrate, wherein the contacts on a rear side of the photosensors are each connected to a through hole in the substrate and, via the through hole, to the rear side of the substrate.

20. The image detector as claimed in claim 19, wherein the substrate includes a material which exhibits a relatively low transparency to x-rays.